

US EPA ARCHIVE DOCUMENT

City of Sacramento

Solar Power Purchase Agreement (SPPA)



Solar PPA

- **Third Party – Finance, Design, Engineer, Purchase, Install and Maintain the Solar PV System for the duration of the PPA. This entity can take advantage of state and federal tax credits, and an accelerated depreciation schedule. They also benefit from Utility Incentives.**
- **Jurisdiction – Leases land to Third Party and purchases all electricity generated by the Solar PV System for the duration of the PPA, generally a 20 year term.**

Background

- 2008 Awarded the Department of Energy Solar Americas Cities Grant worth \$200,000
 - Goal of the Grant:
 - Lead by Example (PPA)
 - Install up to 4 mW of Solar PV
 - Develop a Local Solar Industry
 - Breaking Down Near-and-Long-Term Barriers
- Negotiated and secured very good incentives with the local utility company (SMUD)

Leading by Example

- **Issued Request for Qualifications (RFQ)**
 - Created a Selection Committee using, City, State, and other Agencies employees
 - Short listed 3 firms to provide detailed proposals
 - Received a valid, financially viable bid
- **Keys to Successful Competitive Bid Process**
 - Do your Homework Beforehand
 - Partnerships with experts
 - Be flexible during negotiations
 - Support from the City Managers Office and Council

General Terms & Conditions

- 20 year agreement with up to (2) additional terms of 5 years each
- 2% annual escalator
- Buyout option after 6, 10, and 20 years
- Annual Termination Values
 - Terminating before the end of year 6 can be very costly, the third party needs to receive all of their tax credits, depreciation, and incentives
- Renewable Energy Credits – went to the Utility Company

Phase I

- **City Hall**
 - System Size: 20 DC kW
 - 1.5% of energy provided by solar
- **Development Services**
 - System Size: 423 DC kW
 - 22% of energy provided by solar
- **Corp Yard**
 - System Size: 800 DC kW
 - 56% of energy provided by solar
- **Solid Waste Services**
 - System Size: 650 DC kW
 - 60% energy provided by solar

Phase II

- **Fairbairn Water Treatment Plant**
 - System Size: 1,115 DC kW
 - 12% of electricity provided by solar
- **Sacramento Water Treatment Plant**
 - System Size: 385 DC kW
 - 3% of electricity provided by solar

Helpful Facts

Phase I

- 1.9 MW installed, 8,000 panels
- Equivalent to powering 250 homes
- 99% of the systems are on Carport Structures, added benefit of shade.

Phase II

- 1.5 MW installed, 5,770 panels
- Equivalent to powering almost 200 homes
- 100% Fixed Ground Mounted Systems

Unique Component

- **Recover Administrative Costs**
 - Staffing, equipment, and other related expenses
 - Phase I – capped at \$0.14 per Watt-DC (approx \$268,069)
 - Phase II – capped at \$.05 per Watt-DC (approx \$75,000)

Rebates per Megawatt

Utility Rebate Levels	% of cost of project
\$0.35 (1 st MW)	49
\$0.30 (2 nd MW)	42
\$0.25 (3 rd MW)	35
\$0.17 (4 th MW)	24

Economics

Sites	Average Annual Savings (NPV)	
	Annual Utility Rate Increase of 3.5%	Annual Utility Rate Increase of 0.0%
City Hall, DS, Corp Yard	\$37,000	\$3,700
Solid Waste Services	\$10,000	-\$7,000
FWTP	\$43,800	\$10,800
SWTP	\$12,000	\$1,475

Lessons Learned

- Economies of Scale Matter;
size at each site matters
- Staying off the roof has advantages
- Good Analysis matters
- It takes a team

